

Office Action Summary

Application No.

09/725,646

Applicant(s)

Guanghua Huang et al.

Examiner

T. R. Sundaram

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 19, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 25-33 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13, 17-19, and 25-33 is/are allowed.
- 6) ☒ Claim(s) 14 and 16 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 1 of the specification refers to the present application as “a continuation” of application 60/221550. As explained in MPEP § 201.07, an application claiming the benefits of a provisional application under 35 U. S. C. 119(e) should not be called a continuation.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by *Burr et al.*

Regarding claim 14, *Burr et al.* discloses a test probe (80, Fig. 5) comprising: first and second signal probe tips (94 and 92; column 5, lines 21-22); a single ground structure (95b; column 5, line 20) fixed between first and second probe tips.

Regarding claim 16, *Burr et al.*, discloses that the ground structure (Figs. 5 and 5A) includes a ground contact surface (95b) and a non-contact surface (90, Fig. 5A; column 5, lines

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24-26) substantially parallel to the ground contact surface and offset from the contact surfaces (Fig. 5A).

Consideration of the Applicants Arguments

4. Applicant's arguments with respect to the earlier rejection of claims 14-16 have been considered but are moot in view of the new grounds of rejection. It is only noted that *Burr et al.* discloses a fixed "single ground structure between first and second probe tips" (Fig. 5).

Final Rejection

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Allowable Subject Matter

4. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance (of allowed claims)

6. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, prior art does not disclose a test probe for high-frequency devices comprising two or more signal probe tips, and a ground contact surface with substantially greater than the contact surface of at least one signal probe tip, wherein the ground contact surface is positioned between at least two of the signal probe tips, in the combination claimed.

Regarding claims 10 and 17, prior art does not disclose a test system for, or a method of testing, two or more microwave devices with a test head comprising two or more signal probe tips, and a ground contact surface with substantially greater than the contact surface of at least one signal probe tip, wherein the ground contact surface is positioned between at least two of the signal probe tips, in the combination claimed.

Regarding claim 15, prior art does not disclose a ground contact area that is greater than at least one of the first and second contact areas of the signal probe tips, in the combination claimed.

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Regarding claim 25, prior art does not disclose testing a high-frequency electronic assembly with a test head having first and second test-head contacts, sensing electrical communication between the first test-head contact and a first conductive region, and automatically introducing a test signal through the second test-head contact into the electronic assembly in response to sensing electrical communication between the first test head contact and the second conductive region, in the combination claimed.

Regarding claim 29, prior art does not disclose a method of establishing an electrical coupling of a predetermined characteristic impedance for a surface mount package with a ground pad between first and second signal ports, by adjusting the depth of the ground contact by positioning the overhanging portion of a ground probe a predetermined distance from the first signal port and establishing a predetermined impedance of the first signal port, in the combination claimed.

Regarding claim 31, prior art does not disclose a method of testing comprising a test head with first and second conductive probes, establishing a first characteristic impedance, and then changing at least one of the first and second conductive probes for a second characteristic impedance, in the combination claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

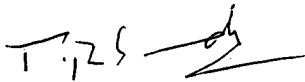
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Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lockwood et al. discloses a wafer probe with ground conductors (29, Fig. 8) spaced between two signal conductors (31; column 4, lines 51-52).

7. Any inquiry concerning this communication should be directed to Dr. T. R. (Joe) Sundaram at telephone number (703) 308-6821. If attempts to reach the Examiner by phone are unsuccessful, the Examiner's supervisor, N. Le can be reached at (703) 308-0750.

A handwritten signature in black ink, appearing to read 'T. R. Sundaram', followed by a horizontal line.

T. R. Sundaram

June 19, 2003